

What is claimed is:

1 1. A method for rejecting a component from a pick/place
2 head in a component placement machine, the steps comprising:

3 a) providing a component placement machine
4 comprising a housing adapted for movement along an X and
5 a Y axis above a printed circuit board and having a frame
6 rotatably attached thereto, said frame having a plurality
7 of pick/place heads disposed thereupon;

8 b) providing a vision system comprising a camera
9 contiguous with said housing;

10 c) picking a component from a supply of components
11 using at least one of said plurality of pick/place heads;

12 d) capturing an image of said picked component, and
13 processing said captured image to determine whether said
14 picked component is placeable or non-placeable;

15 e) providing a reject station contiguous with said
16 housing and adapted to receive a component; and

17 f) rejecting said picked component into said reject
18 station when said picked component is determined to be
19 non-placeable.

1 2. The method for rejecting a component from a
2 pick/place head in a component placement machine as recited in
3 claim 1, the steps further comprising:

4 g) placing said picked component onto a printed
5 circuit board at a predetermined location when said
6 picked component is determined to be placeable.

1 3. The method for rejecting a component from a
2 pick/place head in a component placement machine as recited in
3 claim 1, wherein said rejecting step (f) comprises means for
4 releasing said picked component from said at least one of a
5 plurality of pick/place heads such that the said picked
6 component is deposited into said reject station.

1 4. The method for rejecting a component from a
2 pick/place head in a component placement machine as recited in
3 claim 1, wherein said rejecting step (f) is accomplished
4 substantially completely during at least one of said picking
5 step (c) and said placing step (g).